DETAILED ACTION

EXAMINER'S AMENDMENT

1. The application has been amended as follows: all the original claims 1-20 are amended with format corrections in order to compliance with the final of Reissue format.

Listing of Claims:

1. (Canceled)

2. (Original) A directional ultrasonic pet detection system comprising:

a transmitter means for wearing by a pet, said transmitter means having a directional ultrasonic output, said ultrasonic output emitted in a direction downward toward the ground direction in front of said pet and bounced forwardly in the direction in which said pet is facing;

directional receiver means for detecting said forwardly bounced ultrasonic output, only when said pet is facing said receiver means;

means for converting said detected ultrasonic output to an electric voltage output for the activation of remote controlled apparatus for pets.

3. (Twice Amended) A directional[,] ultrasonic transceiver for pets comprising:

an ultrasonic transmitter means[,] for creating an ultrasonic signal within an ultrasonic field envelope, said ultrasonic transmitter means possessing modulation

means for the creation of one or more modulation codes in said ultrasonic signal, said modulation codes being selectively transmitted;

an ultrasonic receiver means for detection of said ultrasonic signal within said ultrasonic field envelope, said ultrasonic receiver means possessing demodulation means to differentiate between said modulation codes and means for converting the said ultrasonic signal to one or more electric voltage outputs, the output selected depending upon the particular modulation code received, for the activation of various remote controlled apparatus for pets.

4. (Previously Presented) A directional[,] ultrasonic transceiver for pets comprising:

an ultrasonic transmitter means[,] for creating an ultrasonic signal within an ultrasonic field envelope, the output of said ultrasonic transmitter means comprising a series of ultrasound bursts having a predetermined pulse duration, said bursts being emitted at a predetermined rate of bursts per unit time[,];

an ultrasonic receiver means for detection of said ultrasonic signal within said ultrasonic field envelope; said ultrasonic receiver means employing a method of rejecting environmental noise and surface reflections of the bursts by sensing the low to high transition of a first received burst then rejecting any low to high transition of a next received burst which does not occur within a predetermined, narrow window of time and further rejecting said low to high transition of said next received burst if it is not approximately equal in peak amplitude to said low to high transition of said first received

burst, said receiver means further measuring the time duration between said first and next received bursts and activating an electric voltage output means, for the operation of remote controlled apparatus for pets, only when a predetermined number of bursts have been received and accepted at said predetermined rate of bursts per unit time.

5. (Original) A directional ultrasonic detection system to chase pets out of restricted areas comprising:

transmitter means for wearing around the neck of a domestic animal, said transmitter means having a directional ultrasonic output, said output downwardly pointed toward the ground directly in front of said domestic animal and bounced forwardly in the direction in which said animal is facing;

directional receiver means for detecting said ultrasonic output only when said animal forwardly approaches said receiver means on a proximate line of sight path;

means for creating a sensory stimulus at said receiver means for training said domestic animal to retreat from said receiver means upon said detection.

6. (Original) The invention of claim 5 wherein said sensory stimulus is a visible light ray.

7. (Original) The invention of claim 5 wherein said sensory stimulus is a sonic alarm.

8. (Previously Presented) A self opening and closing pet door to automatically open in the presence of an ultrasonic signal and automatically close in the absence of said signal comprising:

a transmitter means for wearing by a pet, said transmitter means having a directional ultrasonic output, said ultrasonic output emitted in a direction downward toward the ground directly in front of said pet, and bounced forwardly in the direction in which said pet is facing;

directional receiver means for detecting said forwardly bounced ultrasonic output, only when said pet is facing said receiver means;

means for converting said detected ultrasonic output to an electric voltage output;

a casing with opening to allow a domestic animal to pass from one side of said casing to another[,];

a movable panel normally placed within said opening to obstruct the path of the animal through said casing[,];

means for moving said movable panel out of said opening in said door casing upon reception of the transmitted ultrasonic signal by said ultrasonic receiver means[,];

means for guiding said movable panel along its path[,];

means for attaching said casing to a wall or door of a building structure.

9. (Previously Presented) The invention of claim 8 wherein[,] said receiver means possesses means to effectively control the distance from the domestic animal at which said receiver means detects ultrasonic output.

10. (Previously Presented) The invention of claim 8 wherein [the] said means to move said movable panel comprises an electric motor[,];

a spool attached to the shaft of said electric motor[,];

a cable, one end of which is attached to said spool, the other of which is attached to said movable panel for the purpose of raising said movable panel as said cable winds around said spool as said spool rotates with the shaft of said electric motor.

11. (Previously Presented) The invention of claim 10 wherein[,] return of said movable panel to its normal position within the opening of said casing is automatically accomplished by the force of gravity once said electric motor is deactivated in the absence of reception of said ultrasonic output by said receiver means.

12. (Previously Presented) A directional[,] ultrasonic area restriction system for animals comprising:

an ultrasonic transmitter means and sound shaping means[,] for creating an ultrasonic signal within an elongated ultrasonic field envelope, said ultrasonic field envelope having an outermost boundary, said outermost boundary having its length several times greater than its width;

ultrasonic receiver means for wearing by an animal, said receiver means for detection of said ultrasonic signal when said animal, approaching from outside of said ultrasonic field envelope, crosses said outermost boundary;

means for creating a sensory stimulus to said animal upon reception of said ultrasonic signal by said receiver means, said sensory stimulus being for the purpose of training the animal to avoid crossing said outermost boundary of said ultrasonic field envelope.

13. (Previously Presented) The invention of claim 12 further comprising[,] means for attaching said ultrasonic transmitter means to a positioning post to be placed in the ground.

14. (Previously Presented) The invention of claim 12 wherein[,] the transmitter means alternately generates two separate modulated signals to define two independent boundaries, the receiver means thereby independently activating a warning tone output and a shock output depending upon which modulated signal is received.

15. (Original) The invention of claim 12 further comprising a variable gain control at said transmitter means to effectively control the size of said ultrasonic field envelope.

16. (Previously Presented) The invention of claim 12 wherein[,] said sensory stimulus comprises a sonic alarm.

17. (Original) The invention of claim 12 wherein said sensory stimulus comprises an electric shock.

18. (Original) The invention of claim 12 wherein said sensory stimulus comprises a warning tone followed by an electric shock.

19. (Previously Presented) The invention of claim 12 wherein[,] said ultrasonic field envelope approximates a beam transmitted along the perimeter of an area to restrict animals to roaming within said perimeter and further comprising a pair of said transmitter means attached to a positioning post to be placed in the ground to establish one comer of the restrictive perimeter.

20. (Previously Presented) The invention of claim 19 wherein[,] said pair of transmitter means are mounted within casings and allowed to rotate relative to one another to adjust the angle of said corner.

Allowable Subject Matter

2. The following is an examiner's statement of reasons for allowance: there are no prior arts teaching or suggesting of a directional ultrasonic pet detection system comprising: a pet worn transmitter means having a directional ultrasonic output emitted in a direction downward toward the ground direction in front of the pet and bounced forwardly in the direction in which the pet is facing; and directional receiver means for detecting the forwardly bounced ultrasonic output, only when the pet is facing the receiver means.

In another embodiment, the an ultrasonic transmitter means for creating an ultrasonic signal within an ultrasonic field envelope, the ultrasonic transmitter means possessing modulation means for the creation of one or more modulation codes in the ultrasonic signal, and the modulation codes being selectively transmitted; and an ultrasonic receiver means for detection of the ultrasonic signal within the ultrasonic field envelope, the ultrasonic receiver means possessing demodulation means to differentiate between the modulation codes and means for converting the ultrasonic signal to one or more electric voltage outputs.

In another embodiment, the output of the ultrasonic transmitter means comprising a series of ultrasound bursts having a predetermined pulse duration, the bursts being emitted at a predetermined rate of bursts per unit time; the ultrasonic receiver means employing a method of rejecting environmental noise and surface reflections of the bursts by sensing the low to high transition of a first received burst then rejecting any low to high transition of a next received burst which does not occur within a predetermined, narrow window of time and further rejecting said low to high transition of the next received burst if it is not approximately equal in peak amplitude to the low to high transition of the first received burst, the receiver means further measuring the time duration between the first and next received bursts and activating an electric voltage output means, for the operation of remote controlled apparatus for pets, only when a predetermined number of bursts have been received and accepted at the predetermined rate of bursts per unit time.

In another embodiment, an automatic pet door system comprising: a casing defining a door opening; a panel movably connected to the casing within guiding means the door opening; a motor attached to the casing; a cable having a first cable end attached to the motor and having a second cable end attached to the panel; a pet worn actuator; a receiver on the casing, the motor selectively moving the panel in the guiding means to open the door in response to a signal received by the receiver from the activator; and the motor having a rotatable drive shaft to which a spool is attached wherein the first cable end is attached to the spool so that the cable is wound around the spool during operation of the motor.

In another embodiment, a pet door comprising: the panel being slidably mounted to the casing for movement within the door opening; a drive means for selectively moving the panel; the drive means including a motor attached to the casing and a cable having a first cable end attached to the motor and a second cable end attached to the panel; a transmitter means attached to a pet, which activates said drive means only when the pet is facing the door; a locking pin movably connected to the panel and having an attachment end and a free end, the second cable end being attached to the attachment end and the casing including a locking pin hole with the free end being insertable into the locking pin hole, the locking pin including a biasing means for urging the free end into the locking pin hole.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

3. Any inquiry concerning this communication or earlier communications from examiner should be directed to primary examiner **Van Trieu** whose telephone number is (571) 272-2972. The examiner can normally be reached on Mon-Fri from 8:00 AM to 3:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Mr. Michael Razavi** can be reached on (571) 272-7664.

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/Van T. Trieu/

Primary Examiner, Art Unit 2612

Date: 10/30/2009